

Amendments to the Claims

The listing of claims will replace all prior versions and listing of claims in the application.

1. (Currently Amended) A packet communication control apparatus for data communication with a mobile terminal, said apparatus being connected via a network to a server for holding information on correspondence between IP addresses allocated to communication apparatuses and the names of said communication apparatuses; a plurality of gateway apparatuses; and a service control apparatus for holding location information and service information for each mobile terminal, comprising:

means for reading ~~the~~an identifier of one of a plurality of said gateway apparatuses from said service control apparatus, said gateway apparatus being a home gateway apparatus set permanently for said mobile terminal;

means for receiving, when an IP address is allocated to said mobile terminal, said IP address from said mobile terminal; and

means for sending said allocated IP address and said identifier of said home gateway apparatus to said server,
wherein said apparatus further comprises:

means for monitoring a signal for sending a query to other communication apparatus about the address information, said address information being sent to said server by said mobile terminal so as to start data communication with the other communication apparatus; and

a memory for storing said address information of the other communication apparatus and said identifier of said home gateway apparatus set permanently for the other communication apparatus, said address information being included in a reply signal returned from said server to said signal,

wherein said apparatus further comprises:

means for reading said identifier of said home gateway apparatus of the other communication apparatus from said memory when receiving a packet addressed to the other communication apparatus from said mobile terminal; and

means for sending said packet to said home gateway apparatus of said mobile terminal after said read home gateway apparatus identifier is added thereto.

2. (Currently Amended) A packet communication control apparatus for data communication with a mobile terminal, said apparatus being connected via a network to a server for holding information on correspondence between IF addresses allocated to communication apparatuses and the names of said communication apparatuses; and a plurality of gateway apparatuses, comprising:

means for receiving ~~the~~an identifier of one of a plurality of said gateway apparatuses from said mobile terminal, said gateway apparatus being a home gateway apparatus set permanently for said mobile terminal;

means for receiving, when an IF address is allocated to said mobile terminal, said IP address from said mobile terminal; and

means for sending said allocated IP address and said identifier of said home gateway apparatus to said server,

wherein said apparatus further comprises:

means for monitoring a signal for sending a query to other communication apparatus about the address information, said address information being sent to said server by said

mobile terminal so as to start data communication with the
other communication apparatus; and

a memory for storing said address information of the
other communication apparatus and said identifier of said home
gateway apparatus set permanently for the other communication
apparatus, said address information being included in a reply
signal returned from said server to said signal,

wherein said apparatus further comprises:

means for reading said identifier of said home gateway
apparatus of the other communication apparatus from said
memory when receiving a packet addressed to the other
communication apparatus from said mobile terminal; and

means for sending said packet to said home gateway
apparatus of said mobile terminal after said read home gateway
apparatus identifier is added thereto.

3-4. (Canceled)

5. (Currently Amended) A packet communication control method
employed for a packet communication control apparatus for data
communication with a mobile terminal, said apparatus being
connected via a network to a server for holding information on

correspondence between IP addresses allocated to communication apparatuses and the names of said communication apparatuses; a plurality of gateway apparatuses; and a service control apparatus for holding location information and service information for each mobile terminal, comprising the steps of:

reading ~~the~~an identifier of one of a plurality of said gateway apparatuses from said service control apparatus, said gateway apparatus being a home gateway apparatus set permanently for said mobile terminal;

receiving, when an IP address is allocated to said mobile terminal, said IF address from said mobile terminal; and

sending said allocated IF address and said identifier of said home gateway apparatus to said server,

wherein said IF address allocated to said mobile terminal is an IF address allocated by said home gateway apparatus,

wherein said method further comprises the steps of:

monitoring a signal for sending a query to other communication apparatus about the address information, said address information being sent to said server by said mobile terminal so as to start data communication with the other communication apparatus; and

storing said address information of the other
communication apparatus and said identifier of said home
gateway apparatus set permanently for the other communication
apparatus in a memory, said address information being included
in a reply signal returned from said server to said signal.

6. (Currently Amended) A packet communication control method employed for a packet communication control apparatus for data communication with a mobile terminal, said apparatus being connected via a network to a server for holding information on correspondence between IF addresses allocated to communication apparatuses and the names of said communication apparatuses; and a plurality of gateway apparatuses, comprising the steps of:

receiving ~~the~~an identifier of one of a plurality of said gateway apparatuses from said mobile terminal, said gateway apparatus being a home gateway apparatus set permanently for said mobile terminal;

receiving, when an IF address is allocated to said mobile terminal, said IF address from said mobile terminal; and

sending said allocated IF address and said identifier of said home gateway apparatus to said server,

wherein said IF address allocated to said mobile terminal
is an IF address allocated by said home gateway apparatus,
wherein said method further comprises the steps of:
monitoring a signal for sending a query to other
communication apparatus about the address information, said
address information being sent to said server by said mobile
terminal so as to start data communication with the other
communication apparatus; and
storing said address information of the other
communication apparatus and said identifier of said home
gateway apparatus set permanently for the other communication
apparatus in a memory, said address information being included
in a reply signal returned from said server to said signal.

7. (Currently Amended) The packet communication control
method according to claim 5;

wherein said method further comprises the steps of:
reading said identifier of said-home gateway apparatus of
the other communication apparatus from said memory when
receiving a packet addressed to the other communication
apparatus from said mobile terminal; and

sending said packet to said home gateway apparatus of
said mobile terminal after said read home gateway apparatus
identifier is added thereto.

~~wherein said IP address allocated to said mobile terminal~~
~~is an IP address allocated by said home gateway apparatus.~~

8. (Currently Amended) The packet communication control
method according to claim 76;

wherein said method further comprises the steps of:
reading said identifier of said-home gateway apparatus of
the other communication apparatus from said memory when
receiving a packet addressed to the other communication
apparatus from said mobile terminal; and

sending said packet to said home gateway apparatus of
said mobile terminal after said read home gateway apparatus
identifier is added thereto.

~~wherein said method further comprises the steps of:~~
~~monitoring a signal for sending a query to other~~
~~communication apparatus about the address information, said~~
~~address information being sent to said server by said mobile~~
~~terminal so as to start data communication with the other~~
~~communication apparatus; and~~

~~storing said address information of the other communication apparatus and said identifier of said home gateway apparatus set permanently for the other communication apparatus in a memory, said address information being included in a reply signal returned from said server to said signal.~~

9. (Canceled)

10. (Original) A packet communication control apparatus connected via a network to a plurality of gateway apparatuses and a subscriber node, comprising:

a table on correspondence between identifiers and addresses of a plurality of said gateway apparatuses;

means for deciding, when receiving a packet to which a header including the identifier of a destination gateway apparatus from said subscriber node, the address of said destination gateway apparatus with use of said table on correspondence; and

means for transferring said packet to said destination gateway apparatus.

11. (Original) A gateway apparatus employed for said packet communication apparatus according to claim 10;

wherein said gateway apparatus comprises means for adding a header including self-address information and the address information of said destination gateway apparatus to a packet to be transferred to said-destination gateway apparatus.

12. (Original) A packet communication control apparatus connected via a network to a plurality of gateway apparatuses; a subscriber node; and a server for holding information on correspondence between IF addresses allocated to communication apparatuses and the names of those communication apparatuses, comprising:

means for monitoring a signal for sending a query to other communication apparatus about the address information, said address information being sent to said server by said mobile terminal so as to start data communication with the other communication apparatus; and

a memory for storing the address information of the other communication apparatus and said identifier of said home gateway apparatus which is set permanently for the other communication apparatus and is selected from among a plurality

of said gateway apparatuses, said address information being included in a reply signal returned from said server to said signal.

13. (Original) The packet communication control apparatus according to claim 12;

wherein said apparatus further comprises:

means for reading the identifier of said home gateway apparatus of the other communication apparatus from said memory when receiving a packet addressed to said communication apparatus from said subscriber node;

means for identifying the address information of said home gateway apparatus of said destination apparatus with use of said table on correspondence; and

means for transferring said packet to said home gateway apparatus of the other communication apparatus.

14. (Original) A racket communication control apparatus connected via a network to a plurality of gateway apparatuses; a subscriber node; and a server for holding information on correspondence between IF addresses of

communication apparatuses and the names of those communication apparatuses, comprising:

a table on correspondence between identifiers and addresses of a plurality of said gateway apparatuses;

means for sending a control signal including address information of the other communication apparatus to said server so as to obtain the identifier of the home gateway apparatus set which is permanently for the other communication apparatus and is selected from among a plurality of said gateway apparatuses when receiving a packet addressed to the other communication apparatus from said mobile terminal; and

means for identifying the address information of said home gateway apparatus of the other communication apparatus from said identifier of said home gate-way apparatus of the other communication apparatus included in a reply signal returned to said control signal by referring to said table on correspondence and transferring said packet to said home gateway apparatus of the other communication apparatus.